Common Core Standards - Resource Page

The resources below have been created to assist teachers' understanding and to aid instruction of this standard.

Domain	**Standard:** F.IF.4-1 - For a linear, exponential, or quadratic function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; and end behavior. *(Modeling Standard)
Interpreting Functions **Interpret functions that arise in applications in terms of the context**	Questions to Focus Learning What are the general shapes of the graphs of different types of functions? What do the key features of the graph of a function describe about the function? Knowing certain features of the graph of a function is helpful to describe the function's shape and behavior. Student Friendly Objectives *Knowledge Targets* I can identify a function's intercepts and local minimums/maximums. I can identify intervals where functions are increasing or decreasing. I can identify whether or not a graph has symmetries. I can determine the image of a function given a pre-image. I can determine the end behavior of linear, quadratic, and exponential functions. *Reasoning Targets* I can translate a verbal description of a graph's key features into a graph. I can give a verbal description of a graph's key features. I can give intervals where the function is increasing/decreasing. I can give intervals where the function is positive/negative.

	Vocabulary decreasing domain end behavior image increasing intercepts negative positive pre-image range relative maximum relative minimum symmetry Teacher Tips Vertical Progression F.IF.4-2 - For any function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. *(Modeling Standard) F.IF.5-1 - Relate the domain of a linear, exponential, or quadratic function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function. *(Modeling Standard) F.IF.6-1 - Calculate and interpret the average rate of change of a linear, exponential, or quadratic function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph of a function over a specified interval. *(Modeling Standard)

The above information and more can be accessed for free on the Wiki-Teacher website.
Direct link for this standard: F.IF.4-1